Tetra Tech EM Inc.

7932 Nieman Road ◆ Lenexa,KS 66214 ◆ (913) 894-2600 ◆ FAX (913) 894-6295

September 17, 1998

Mr. Ken Herstowski
U.S. Environmental Protection Agency, Region 7
RCRA Compliance Section
726 Minnesota Avenue
Kansas City, KS 66101

Subject: **Trip Report for Sample Collection Activities at the Union Pacific Railroad Facility, Omaha, Nebraska Contract No. 68-W4-0004, Work Assignment No. R07040**

Dear Mr. Herstowski:

Tetra Tech EM Inc. (Tetra Tech) is submitting one copy of the trip report for sample collection activities at the above-referenced facility. The enclosed trip report details the sampling activities performed by Tetra Tech, and Tetra Tech's subcontractor, Plains Environmental Services. These sampling activities were conducted to verify if solid waste management units and areas of concern identified during the Resource Conservation and Recovery Act Facility Assessment have released any hazardous constituents to the environment.

If you have any questions or comments regarding this trip report, please call Ms. Paige Marret at (913) 495-3919 or me at (913) 495-3915.

Sincerely,

Keith A. Brown

Keith A. Brown
Environmental Scientist

Enclosure

cc: Aaron Zimmerman, U.S. EPA-RPO (Cover letter only)
Kathy Homer, Tetra Tech Regional Manager (Cover letter only)
Paige Marett, Tetra Tech

TRIP REPORT

UNION PACIFIC RAILROAD FACILITY
OMAHA, NEBRASKA

PURPOSE

Tetra Tech EM Inc. (Tetra Tech) conducted sampling activities at the Union Pacific Railroad (UPRR) facility in Omaha, Nebraska on August 23 through 26, 1998. The purpose of the sampling activities was to verify if specific solid waste management units (SWMU) and areas of concern (AOC) have released any hazardous constituents to the environment. Sampling activities consisted of Tetra Tech collecting groundwater samples and measuring static water levels (SWL) from existing on-site monitoring wells, and collecting surface soil samples. Plains Environmental Services (PES) was subcontracted by Tetra Tech to collect soil gas, soil, and groundwater samples with the use of a Geoprobe® , and to analyze the samples on site for volatile organic compounds (VOC). Woodward-Clyde personnel conducted oversight of the sampling activities and obtained split samples of specific groundwater and surface soil samples collected by Tetra Tech, on behalf of UPRR. Specific samples collected by PES and all samples collected by Tetra Tech were submitted to the U.S. Environmental Protection Agency (EPA) Region 7 laboratory for analysis on August 26 and 27, 1998.

FIELD WORK

Tetra Tech personnel who were present on site during the sampling activities consisted of the following: Mr. Curt Enos, team leader; Mr. Keith Brown, sampler and on-site health and safety officer; Ms. Teri Pham, sampler; Mr. Jim Dunajcik, sampler; and Mr. David Farnam, sampler. The EPA work assignment manager (WAM), Mr. Ken Herstowski, was also present on site during the sampling activities on August 24 and 25, 1998. Woodward-Clyde personnel present on site during the sampling activities consisted of: Mr. Jeff Smith; Mr. Robert Mallisee; and Mr. Jeff Hopkins. All field work was documented in three separate logbooks. Copies of the logbooks are included in Attachment A.

Tetra Tech arrived on site at 4:30 p.m. on August 23, 1998, and flagged the subsurface sampling locations that would need utility clearance verification. Tetra Tech returned to the site on August 24, 1998 and met with EPA, UPRR, and Woodward Clyde personnel next to the Wheel Shop at 8:00 a.m. Mr. Enos and Ms. Pham showed UPRR utility locators the tentative subsurface sampling locations. All subsurface sampling locations were cleared by UPRR personnel prior to sampling. Mr. Brown and Mr. Herstowski located the monitoring wells to be sampled while Mr. Dunajcik and Mr. Farnam obtained the drums that were placed next to each well to be sampled. One 55-gallon polyethylene drum was left next to each monitoring well to contain purge water. PES arrived on site at 12:30 p.m. on August 24, 1998. Mr. Enos and Ms. Pham provided oversight for the Geoprobe® sampling and on-site analyses.

Tetra Tech collected 15 groundwater samples, including one duplicate, from 14 monitoring wells. The sampling locations are shown on Figure 1 in Attachment B. Prior to sampling, total well volumes were calculated after measuring the SWL and total depth of each well. A minimum of three well volumes was purged from each monitoring well with the use of a disposable bailer. Water quality parameters (temperature, pH, and conductivity) were recorded on each well volume with a HyDAC 910 meter while purging each monitoring well. Samples were not collected until all water quality parameters were stabilized to within 10 percent of the previous recording. Final water quality parameters for each monitoring well are shown on Table 1. Tetra Tech filled two 40-milliliter (mL) vials, one 1-liter cubitainer, one 1-gallon amber jug, and one 1-liter amber jar for volatiles, metals, pesticides and semivolatiles, and extractable petroleum hydrocarbons analyses, respectively, for each monitoring well sample. The samples were then labeled and placed in an ice-filled cooler. Field sheets were completed for each sample. Woodward-Clyde collected split samples from three monitoring wells (MW-L, MW-10, and MW-4). Only nondisposable sampling equipment was used to collect the monitoring well samples. In addition to the monitoring well sampling, Tetra Tech recorded the SWL of most of the remaining on-site monitoring wells. A groundwater contour map will be developed and included with the data summary under separate cover.

Tetra Tech collected seven surface soil samples including one duplicate and one equipment rinsate from 0 to 2 feet below ground surface (bgs). The sampling locations are shown on Figure 1 in Attachment B. Each surface soil sample represents a 5-point composite sample with the exception of the sample collected around the former transformer pad at SWMU 4, which consisted of a 4-point composite. All

TABLE 1

FINAL WATER QUALITY PARAMETERS
UPRR FACILITY, OMAHA, NEBRASKA

MONITORING WELL	pH	CONDUCTIVITY (μmhos)	TEMPERATURE (°F)
MW-Q	6.92	1795	61.1
MW-U	6.16	2510	67.0
MW-17	6.32	1351	73.4
MW-Y	6.29	4350	66.5
MW-L	7.10	1450	65.5
MW-10	7.16	576	68.8
10	7.11	1176	61.2
MW-01	7.81	511	74.5
MW-11	6.90	695	62.4
MW-06	7.14	932	64.2
MW-15	6.91	914	61.4
MW-04	6.77	722	--
MW-03	--	--	--
MW-M	--	--	--

Notes:

μmhos	Micromhos
°F	Degrees Fahrenheit
--	No measurement collected; the water quality meters were not functioning properly.

surface soil samples were collected with the use of a stainless-steel bucket auger. The soil was placed in an 8-quart stainless-steel bowl, homogenized with a large stainless-steel spoon, and placed in 8-ounce glass jars. The samples were then labeled and placed in an ice-filled cooler. Field sheets were completed for each sample. Three of the seven samples collected were submitted for pesticide/polychlorinated biphenyls (PCB) analysis. The other four samples, including the duplicate and equipment rinsate, were submitted for pesticide/PCB, semivolatiles, and metals analyses. Woodward-Clyde collected split samples from three locations (SWMU 20 (north pit), SWMU 21 (south), and SWMU 4). All nondisposable sampling equipment was decontaminated prior to use and between sampling locations. Decontamination procedures included scrubbing the sampling equipment in an Alconox and tap water solution followed by rinsing with deionized water.

Tetra Tech oversaw PES collect two soil gas, five soil, and 27 groundwater samples, including two duplicates and one equipment rinsate, with the use of a Geoprobe®. The sampling locations are shown on Figure 1 in Attachment B. These samples were all analyzed on site for VOCs. All samples were collected from about 8 feet bgs. Initially, only soil gas and possibly soil samples were going to be collected with the Geoprobe®. However, the groundwater was shallow at most of the sampling locations (less than 3 feet bgs) and therefore a decision was made to switch to sampling groundwater, when encountered, instead of soil gas. Five of the 27 groundwater samples collected were also submitted for confirmatory VOC analysis. All sampling results will be discussed in the data summary, which will be submitted under separate cover. All nondisposable sampling equipment was decontaminated prior to use and between sampling locations. Decontamination procedures included scrubbing the sampling equipment in an Alconox and tap water solution followed by rinsing with deionized water.

OBSERVATIONS

Tetra Tech noted the following observations during sampling and oversight activities:

- The following monitoring wells are damaged and cannot be sampled: MW-1, located next to the Diesel Servicing Facility; MW-2, located east of the Babbit Shop; and MW-8, located west of the Old Transformer Storage Area.

- The following monitoring wells could not be located: MW-R, allegedly located south of Store No. 1; MW-2, allegedly located north of the New Transformer Storage; MW-16, allegedly located east of the Power House; MW-7, allegedly located west of the Old Transformer Storage Area; and MW-5, allegedly located east of the Research and Development Lab.

- Monitoring well MW-U has almost completely silted in. The well was bailed dry after only purging 0.75 gallon.

- Both of the surface soil samples collected in the Acetylene Sludge Pits exhibited strong odors and readings greater than 2,000 parts per million (ppm) on the photoionization detector. The breathing zone remained below 5 ppm.

- Sampling locations for AOC 6 (Chemical Storage Building) were omitted because according to UPRR personnel, the building sat where the concrete pad for the hazardous waste storage area (SWMU 8) was located. Samples were collected at SWMU 8.

- MW-B was originally going to be sampled; however, due to free product (diesel fuel) on the groundwater, Mr. Herstowski decided to omit this sample.

- MW-M was sampled in place of MW-1 because MW-1 was damaged and could not be sampled.

- MW-2 was not sampled due to its close proximity to railroad tracks. UPRR personnel stated that no samples are to be collected within 25 feet of railroad tracks.

SUMMARY

Tetra Tech collected 15 groundwater samples, including one field duplicate, and seven surface soil samples, including one field duplicate and one equipment rinsate sample, for confirmatory laboratory analyses at the UPRR Facility. Tetra Tech oversaw PES collect two soil gas, five soil, and 27 groundwater samples, including two duplicates and one equipment rinsate, with the use of a Geoprobe®. These samples were all analyzed on site for VOCs. Five of the 27 groundwater samples that were collected by PES were also submitted for confirmatory VOC analysis. This sampling occurred on August 24 through 26, 1998. The confirmatory samples were all delivered to the EPA Region 7 laboratory on August 26 and 27, 1998. Field sheets are provided in Attachment C. The results of all of the on-site and off-site data will be discussed in a data summary, which will be

submitted under a separate cover. Attachment D contains photographs taken during the sampling event.

ATTACHMENTS:

A Field Logbooks

B Figure 1

C Field Sheets

D Photographic Log

ATTACHMENT A

FIELD LOGBOOKS

(1)

Union Pacific Railroad
8/24/98

Spent Morning moving Polydrums to the well locations.

Tetra Tech Crew:
Teri Pham
Curt Enos
Kieth Brown
David Farnam (DWF)
Jim Dunajcik (JSD)

Ken Herstowski - EPA WAM also present. as well as
- Woodward Clyde

14:20 @ MW-B
PID - Battery low.
Water Level = 7.36' (FREE PRODUCT)
T.D. = 22.75' (VERY SILTY)

14:30
Ken said: no sampling here due to Diesel free product.

(2)

14:45 @ MW-Q
PID UPON REMOVAL OF CAP 300 PPM
0 PPM IN BREATHING ZONE
WATER LEVEL = 3.25' (FREE PRODUCT)
T.D. 12.01'
1/8" FREE PRODUCT @ TOW
14:55
BEGIN BAILING WELL
15:15

Vol 1 Measure	Vol 5 Measure
Temp. = 70°	T = 61.1
Ph = 6.78	Ph = 6.92
Cond = 1923	Cond = 1795
Vol 2 Measure	
Temp = 65.2	
Ph = 6.89	
Cond. = 1819	
Vol 3 Measure	
Temp = 63.0	
Ph = ~~6.89~~ 6.91	
Cond. = 1872	
Vol 4 Measure	
Temp = 61.4	
Ph = 6.91	
Cond = 1815	

15:50 Sampled MW-Q

EPA ID No: ADH13-003 for VOCs, SVOCs, Pesticides Metals, TPH.

(13)

17:12 @ MW 11

PID upon cap removal 10 ppm

0 ppm in breathing zone

Water level = 5.57'

T.D = 7.37'

Vol = 0.29 gal.

17:25 Begin Bailing.

Vol	Temp	pH	Cond
initial	67.7	5.80	2660
1	67.0	6.16	2510

17:37 Bailed Dry 0.75 gallons removed.

1.5 gallons required for sampling. Will ask Ken if we should even sample.

Will do partial analysis tomorrow for VOCs - metals, TPH.

Sample to be collected tomorow.

(14)

@ MW 10

PID: upon cap removal

ppm in breathing zone

Water level -

T.D.

Not measured.

Could not gain access to well. Lock w/out key and too strong for our small bolt cutters.

17:58 @ MW-17

PID = 220 ppm inside casing Oppa Breathi.. Zone

Water Level = 5.00'

Total Depth = 14.58'

Vol = 1.5 gallons.

18:10 Begin Bailing

Vol	Temp	pH	Cond
initial	64.5	6.13	1417
1	73.1	6.20	1385
2	73.3	6.23	1407
3	72.7	6.30	1358
4	73.4	6.32	1351

18:40 Sample Collected

EPA ID NO: ADH13-0004

(6)

8-25-98

8:37 @ MW-U

WATER LEVEL = 5.35'

8:45 Sample Collected

EPA ID NO: ADH13-0005

Collected VOCs, TPH-OA2, Metals

the TPH jar was 2/3 full when well bailed dry.

Could not collect for SVOCs, Pest.

9:30 Calibrated the PID.

at MW-Y - will take level readings from ~~previous measurements~~ taken by Ken Hasiowski + Kieth Brown yesterday.

Water level = 3.74 @ 9:41.

Total Depth = 14.26

1 vol = ~~0.5 gallons~~ 1.7 gallons

PID max reading = 152 ppm in casing

0 ppm in Breathing Zone.

Time	Vol	Temp	pH	Cond.
10:05	initial	75.5	5.95	3510
10:08	2 gal	69.2	5.95	3990
10:12	4 gal	66.0	6.08	3860
10:17	6 gal	68.0	6.01	4020
10:21	8 gal	67.3	6.23	4210

8/25/98

(9)

Time	Vol	Temp	pH	Cond
10:30	10	66.5	6.29	4350

Well is recharging slowly

EPAID No: ADH13-0006

10:50 Sampled MW-Y

level prior to sampling 3.75'

Woodward Clyde took split sample.

11:25 Break for lunch

Levels at MW-2

13:10

0 ppm PID.

WATER LEVEL = 6.29'

T.D = 21.65'

PURGE VOL = 2.5 GAL

Time	Vol	Temp	pH	Cond
1320	initial	75.5	6.82	1290
1327	2.5 gal	66.0	6.96	1458
1333	5 gal	64.5	7.04	1425
1340	7.5 gal	65.5	7.10	1450

1350 Sample + Split collected

EPA ID NO: ADH13-0007

(1)

Union Pacific Railroad
8/25/98

1420 @ MW-10

1 well Vol = 2.5 gallons
PID = 17.6 ppm resp
0 ppm Breathing zone

Time	Vol	Temp	Cond.	pH
1425	initial	75.5	650	6.90
1432	2.5gal	69.5	578	7.15
1440	5gal	67.8	580	7.27
1445	7.5gal	68.8	576	7.16

1455 Sample collected
EPA ID No: ADH13-0008

1522 Met Curt + Teri they collected Groundwater sample from Geoprobe location at SWMU#4, GW-02
EPA ID NO: ADH13-0009.

1540 @ Well 10

1 Vol = 4.7 gallons (from Ken + Kieth's)
PID = ~~500~~ 19.5 in casing
0 ppm in Breathing

8/25/98

(2)

Well 10

Time	Volume	Temp.	Cond.	pH
16:00	INITIAL	74.2	~~8.51~~	6.84
16:04	5 GAL	68.4	~~9.75~~	7.06
16:14	10 GAL	61.0	~~11.87~~	7.04
16:28	15 GAL	61.2	1176	7.11

Sampled Well 10 @ 1640
EPA ID No: ADH13-0012

Trip Blank on 8/24/98
= EPA ID No: ~~ADH-001~~ ADH13-0011

Trip Blank on 8/25/98
= EPA ID No: ADH13-0013

17:30 @ MW01 PID=160 ppm
1 well Vol = 1.7 gal 3 Vol = 5.1 gal
GW Level = 1.00'
Total Depth = 11.20

Time	Vol.	Temp	Cond	pH
17:51	initial	81.6	421	6.84
17:53	1.5 GAL	76.5	461	7.30
17:55	3.0 GAL	75.3	495	7.64
17:57	4.5 GAL	74.5	511	7.81
18:03	7.5 GAL	74.7	503	7.87

(W) 8/25/98

Sampled MW-1 @ 18:15
Double volume & a duplicate sample were collected Here.
EPA ID NO: ADH13-014
Dup - ADH13-014D

8/26/98 (W)

1015 - @ MW-11 2 inch well
SWL = 4.83' bgs
TD = ~~24.6'~~ 22.52' bgs
water col. = 17.69'
x .17
1 well vol. = 3.0 gal
3 well vol = 9.0 gal
1.6 ppm upon opening well

Time	Vol.	Temp	Cond.	pH
10:34	INITIAL	64.0	650	6.87
~~10:40~~	~~3 GAL~~			
10:40	3 GAL	63.9	688	6.86
10:48	6 GAL	62.4	695	6.90

1100 - collected MW-11 sample filled extra gallon for lab QC

1150 - @ MW-6 SWL = 5.64' bgs
TD = 22.0', water col. 16.36'
1 well vol = 2.78 gal
3 well vol = 8.34 gal

8/26/98

TIME	VOL	TEMP	COND	PH
12:01	INITIAL	74.1	945	~~7.04~~
12:05	3.5 GAL	65.1	955	7.09
12:11	7.0 GAL	66.3	946	7.15
12:16	10.5 GAL	65.0	940	7.14
12:19	14.0 GAL	64.2	~~929~~ 932	~~7.18~~ 7.14

1225 - collected sample MW-6

1345 - @ MW-15 SWL = 5.25' BGS

TD = ~~19.17'~~ ~~22.42~~ 19.45' H_2O col. = ~~7.28~~ ~~7.17~~ 13.92'

1 well vol = ~~2.92 gal~~ ~~2.38~~ 2.37 gal

3 well vol. = ~~8.76~~ 7.1 gal

Time	Vol	Temp	Cond.	pH
14:15	INITIAL	64.0	745	6.88
14:18	2.5	62.3	876	6.82
14:26	5.0	61.4	952	NA
14:36	7.5	64.0	943	6.97
14:40	8.0	61.4	913	6.96
14:42	9.0	61.4	914	6.91

8/26/98

15:24 @ MW-4

SWL = 0.39' BGS

TD = 19.0'

1 WELL VOL 3.1C GAL / VOLUME

3 WELL VOL 9.5 GAL

TIME	VOL	TEMP	COND	pH
15:32	INITIAL	73.5	444	7.50
15:37	3.0 GAL	65.2	939	6.77
15:43	6.0 GAL	*	455	6.78
15:50	11.0 GAL	*	625	679
15:55	12.0 GAL	*	722	677

* NOT WORKING CORRECTLY

*4 WELL VOLUMES PURGED BAILED + 12 GALONS

* HYDAC NOT FUNCTIONING PROPERLY PURGED PAST TYPICAL STABILIZATION

16:03 SAMPLED MW-4

(B)

8/26/98

1640 @ MW-3

SWL = 4.73' bgs

TD = 20.19' bgs

H_2O Col. = 15.46'

1 well vol = 2.63 gal

3 well vol = 7.88 gal

All 3 Hydac water quality meters are not working properly. Past wells have stabilized within 3 well vol. 4 well volumes will be purged to be better assured of stabilization

1725 - collected sample at MW-3

1715 Curt + Teri at MW-4

SWL = 3.225' bgs

TD = 17.83' bgs

H_2O col = 14.6'

1 well vol = 2.48 gal

4 well vol = 9.9 gal

1750 - collected sample at MW-4

(A)

8/24/98

MW-17 – ~~upon opening~~ cap 125 ppm, ~~stable~~
at 75 – 80 ppm
MW-15 – 0.3 ppm

MW-O 5.37' TOC
29.25" Case Height

MW-B 10" Case Height

MW-C 5.18' TOC
Flush to Surface

MW-I 7.67' TOC
2.5" BGS

MW-N ~~11.92~~ 12.2' TOC
3.89' oil
13.75" case height

8/24/98

MW-X 9.67' TOC
6" casing height

MW-T 13.25' TOC
43.5" casing height

MW-Z 5.78' TOC
Flush to surface

MW-K 9.87' TOC
0.77' oil
6" casing height

MW-L 4.41' TOC
4.5" AGS

MW-W 5.06' TOC
1.20' oil
4.75" BGS

MW-13 9.76' TOC
~~7.30~~
~~2.46~~ 2.46' AGS

8/24/98

(3)

MW-14 7.75' TOC
41.5" AGS

MW-15 8.50' TOC
39" AGS
22.42' TD

10 6.84' TOC
33" AGS
36.15' TD

MW-1 0.66' TOC
1.75" BGS
10.76' TD

MW-4 0.87' TOC
2.75" BGS
11.47' TD

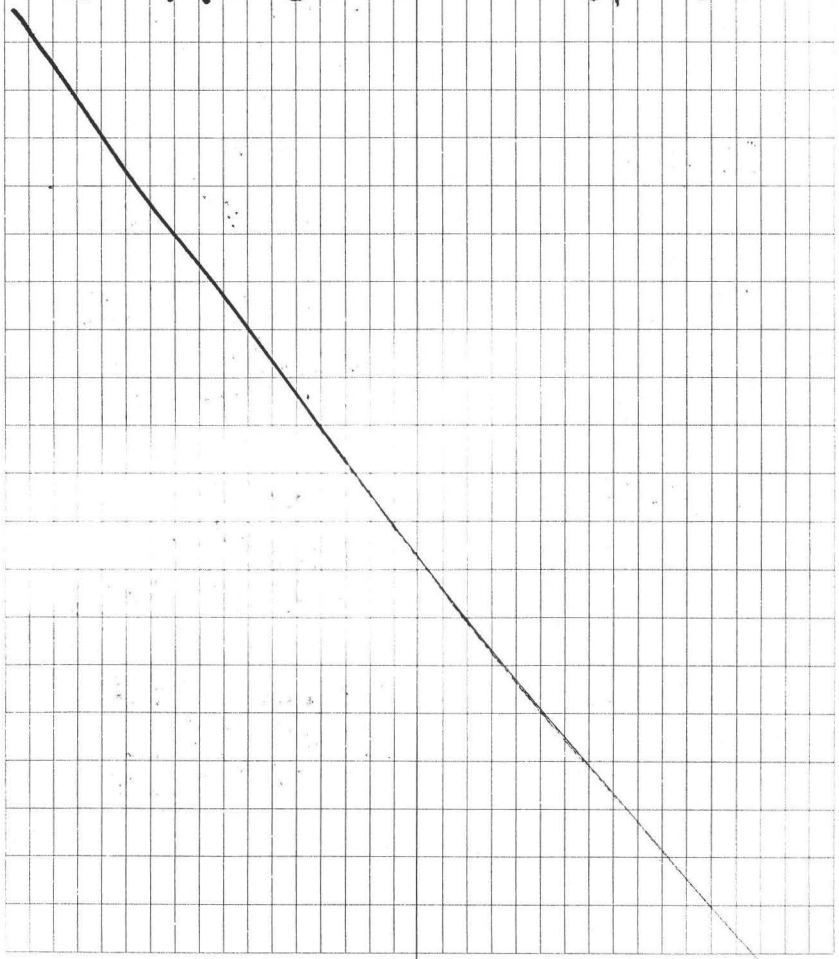
MW-V 2.95' TOC
0.84 oil
2" AGS

8/24/98

(4)

MW-M 5.60' TOC
28.5" AGS
20.2' TD

Ken Herstowski 8/24/98



8/25/98

MW-12 12.43' TOC
32.5" AGS

MW-11 6.91' TOC
25" AGS
24.6' TD

MW-5 6.82' TOC
32.25" AGS

MW-6 8.16' TOC
22.0' TD
30.25" AGS

MW-4 0.79' TOC
19.38' TD
4.75" BGS

MW-2 0.5 ppm PID
6.03' TOC
41.75" AGS

8/26/98 (11)

MW-3 0.0 ppm PID
7.23' TOC
22.69' TD
30" AGS

MW-10 0.0 ppm PID
6.32' TOC
21.90' TD
40.5" AGS

MW-7/8 1.5 ppm PID
Broken / ~~plug~~

Sunny, light wind, hot
Soil sampling start SWMU 20-
KAB
NS. Pit 11:30 SN ADH13-145 #145D
5 aliquots composite, sysport/PCBs/M
Finish 12:20

(7) 8/26/98 MB

1520 - 15:45 collected soil sample 0-2' bgs at SWMU-21-A (road) Woodward Clyde split sample 5-point composite sample

15:55 - 16:15 collected soil sample 0-2' bgs at SWMU-21-B (north) 5-point composite

17:10 - 17:30 collected soil sample 0-2' bgs at SWMU 4. 4 point composite Woodward Clyde split

18:10 + collected rinsate sample off of soil sampling equipment

8/26/98

8/26/98 (8)

09:00 - 09:45 collected soil sample 0-2' bgs at SWMU 20 Sewage pit 5 point composite 300+ ppm on PID

8/26/98

8/23/98

~~00A~~-048 251-R070400666 UPRR Omaha

1000 - Meet at office, local equipment and Supplies.

1115 Depart for site

1300 Lunch

1330 Continue to Site

1500 Arrive a hotel, repack van

1630 On-site marked proposed Sampling location. Other crew went for supplies.
MW-1 appears damaged, may Sample MW-M instead. At Swmu #8 there is a Well MW1 which may be Sampled. Drilling appears like it going to be difficult. Did not mark at Stores 1&2 or Grease st-pits due to vegetation. Did not mark

8/23/98 ~~0800~~ U.P. Omaha

locations at ~~[illegible]~~ Wheel Shop or Steel Car Shop due to Operations.

8/23/98

[signature]

8/24/98 LSI R07040666 U.P. Omaha

0700 Meet in lobby, fax in time sheets meet w/ Ken Herstowski.

0800 On site meet UP personell who will perform utility locates. Also present are Robert Mallisee, Jeff Smith and Jeff Hopkins of Woodward Clyde. They will be splitting samples. Ken and Keith Brown are locating monitoring wells and will be measuring water levels. Dave and Jim are going to get drums for the purge water and will place them by the wells they are sampling. The drums will be left next to the wells. Jeff Smith provides a health and Safety briefing the work is to take place within

25 feet of Tracks.
1900 Locations at SWMU 8 (Temp Haz Waste pad) are near a phone line. UP will call in phone repair man. Confirm location of Solvent and wash tanks (caustic) at Blue Building. These locations are clear. UP assists us in measuring in locations of Store #4 and Oil & Gas Storage at Stores area. Place 2 locations inside Store #1 which has had the foundation removed. locations cleared along Machine Shop (SWMU 6) at Southeast corner of building were pits where up to 3000 gallons of diesel fuel at a time

was dumped on the ground to empty locomotive brought in for servicing.
Note: Sample locations for AOC 6 were deleted because according UP representatives the building sat where the concrete path set for the Haz Waste Storage area (SWMU 8) was located. We have 2 locations here and there are several monitoring wells in this vicinity that we may sample instead.
1100 Marked locations to south of Steel Car Shop by turntable. Asphalt fairly thin here. Steel cars were repaired and Fabricated here. Mostly welding conducted

1120 Walked through Wheel Shops
There were two washers for wheels
on the north side of the Building
by SWMU 13 S61 and 2. Solvents
and hot steam were used to remove
grease. Wheels were then ground
and magna fluxed. On
south side we added location
near the two paint shops.
Added two locations on east
side of the Steel Car Shop.
All other locations clear,
confirmed the location of the
chemical spill area and the
Acetylene Sludge pits.
1200 Return to office
to wait for drillers. Review

plans and Quapp with crew
eat lunch and transfer sampling
gear. It appears we may be
short of VOA vials as the
lab requires 2 for VOC's and 2 for
TPH-purgeables. Also need clarification
on number of jars required for SVOC's
PEST/PCB and TPH-E. Keith
calls and orders additional jars.
Plains Env. On-site at 12:30
They will break for Lunch. 1315
Plains back on-site. Need some
additional time to run calibrations.
Carbon Tet will increase run times
About 20 minutes per sample.
If we saturate a detector
we will resample at a later

8/24/98 | CS1-IC01040606 | UP Omaha

date and collect a confirmation Sample in a Summa canister. Check a Voice mail, call Double eagle.

1430 Move to first hole at SWmu 8 - SG-2

Begin Drilling 1445

1500 Water at 6 feet, and 5 feet.

1510 Set up at SWmu 8 SG-1 will start at 3 feet here. Geoprobe will use PRT rods. Water appears to be around 3 feet

1527 Move to SWmu 9- SG-1 at Old Traction Motor Shop building - Will try 3 feet

1540 Advise Ken water table is too high for Soil gas

8/24/98 | CS1-IC01040606 | UP Omaha

We will switch to GW at SWmu 9.

1545 - SWmu 9, Screened interval SWmu 9 - GW-1 collected from 8-10 ft interval. Very Clean

1555 Set up a SWmu 9 GW-4, No water at 8-10, drive 10-12 no water. Pull up rods. Sample lost down hole on second attempt. Crew fishing for sampler

1695 Pull out of hole at SWmu 9 GW-4. No water could be recovered with screen

1700 We will move to SWmu 9-SG-2 (mislabled w/spray paint) Successfully collect Soil gas at 8 feet.

1725 SWmu 9 SG-3, try-5 6

at 8 feet. Got water, Will collect Water instead at SWMU 1-SG-3

MW-2, 1/2 ft of product

MW-B - Thick product

at SWMU 1-SG1 collect soil gas correction. We are drawing water through the tubing. Collect water by pulling vacuum on tube, Note diesel odors from water.

1750 Move to SWMU 1-SG-2 at roundhouse (North side)

Got refusal on first Attempt

Moved back, tried, at 8 feet no gas flow, probably water.

1800 No flow in SG, no water - Will collect a soil sample from 7-8 feet from tip of SG Sampler.

1810 Move to SWMU 6-SG-1 Collect Soil from 7-8 feet No flow in SG, no flow in GW. Scrapped soil with Sampler Tip.

1830 Off Site

8/24/98

[signature]

Not use

Curt Emr

8/24/98

Not used

Curt Emr

8/24/98

0830 On-site, Plains has several more standards to run

0845 Set up on SWMU 6, SG-2 Rubble most of way down

885 GW in sampler Will collect water instead

900 Ground water had roughly a quarter inch of oil on top. Strong diesel odor. Water from 8 feet

0910 Set up on SWMU 6 - SG-3 Some rubble. Drive to 8 feet, no SG Collect GW instead. Sample cleaner, strong diesel, fresh fuel smell. Some product visible

0930 Move to SWMU 6 - SG 4 There is a large manhole cover adjacent to location. Between former fuel Shop and Machine Shop No flow in SG no water visible in tube. Will collect soil. No Soil in bottom of sampler. Will collect ground water from open hole by applying Vacuum to SG poly tubing. Very little flow, water at 5-6 feet. Diesel odor

000 Set up at SWMU 6 - SG-6 good flow, successfully collect SG.

1030 Set up at AOC 2 SG-1 Pulled SG, got Water instead from 8 feet.

1045 AOC 2-SG 3 No flow in SG or GW will collect Soil No recovery in Soil, No Water in open hole

We will use large bore
Sampler to collect soil
from 7-8 feet. Very
Tight grey clay, Diesel odor
1120 Move to AOC 2 SG 4
No Water, NO Soil Gas
let sampler sit, SG pipe
filled with Very clean Water
1200 Lunch
1300 Purchase supplies
1325 Set up at SWMU 6 - SG-5
Drive to 8 feet, No flow
in SG, Appears to be water in
hole
1335 No Water at SWMU 6 - SG-5
Will collect soil from sampler
Wanted and collected water

at SWMU 6 - SG-5 from 8 feet.
1345 Set up at SWMU 4-SG-3
near Southwest corner of Blue Building
Near Izard Street Sewer line.
Some manholes 10 feet to South
1350 Climbed Izard Burt Pump
Station and took photos from
top of station of site. Strong
solvent paint thinner odors
were coming from Sewer
1400 SWMU 4- SG-3 no soil
gas. Collected groundwater from
Within rods. No odor, sample
was cloudy water.
1410 Move to SWMU 4 - SG-4
near North West corner of former
Blue Building. A long trench

8/25/98 257RD7040666 U.S. Ditch

is visible to the south and a concrete block building with a ramp in front (Flamable Storage ? or a paint booth) is just to the north east. There is a central sump and the floor slopes to the center here

1415 No water or SG on first attempt at SWmu 4-SG-4. Collected a soil with rod tip will attempt a groundwater also from the open hole. Water was successfully collected here Soil will not be analyzed On this hole

1430 Move to SWmu 4-SG-2 Made 3 attempts, refusal at 2, 1.5 and 1 foot. Moved to concrete to the east & Concrete about 4 inches thick, rubble underneath. Collect soil sample in top will attempt groundwater, Noted Chlorinated solvent smell in hole. Will send down sampler again post stack on. Collect Additional groundwater at SWmu-4-GW-2 for offsite analysis.

1550 Move to SWmu 4-SG-1 Concrete area by solvent & Caustic tanks. Faint diesel odor, Jesse smells solvents. No flow, Soil very clayey and wet. Will try to collect water from open hole

01/05/98 257-RD7040666 U.S. Ditch

~~1555~~ 1615 Collect second confirmation Sample at location SWMU 4 -SG-1 Drop Sample off with Farmer and GW crew. The surface soil sampling is nearly finished. Call in an order for the replacement of a damaged Hydrac. Plains is shooting some new standards and needs some time to catch up. They go off-site for a break.

1715 Set up at SWMU-8 SG-2 to collect sample from .5 to 2.5 feet. Collected a foot. Material was stained

1730 Notify employees inside Steel Car Shop we would be drilling. Crew delayed by passing train.

1745 Set up on SWMU 16, SG-1 between Steel Car Shop and new Paint Shop. Will attempt Soil gas. No SG. Collect GW instead. Heavy oil Staining on tubing. Possible motor oil odor

1800 Move to SWMU 16-SG2, Will attempt to collect a soil gas Sample. No SG Collect GW at 8 ft. Less cloudy no odor on 1st sample.

1900 Off-site for the day

8/25/10
[signature]

8/26/98 LS/KP7040666 U.P. Omaha

0800 On-site, meet w/ Plains. check with Mr Dike operations manager at the Steel Car shop to make sure we would not be in the way.

0830 Checked Acetylene sludge pits for access with Plains. it looks soft but doable. Found the south pit that Keith and Ken had missed the previous day. Keith will resample it with Jim. Dave will fill out COC's and take samples to the lab

0900 Move to S^wm^-13-GW-2, Collect groundwater from 9 feet muddy groundwater sample. SG not attempted. No odor in sa

0920 Move to S^wm^-13-GW-1. On

8/26/98 LS/KP7040666 UP Omaha

north loading dock of Wheel Shop Collect groundwater from 9 feet. No odor in sample. Locations SWMU-13-GW-2 and SWMU 13-GW-1 are near the locations of a former wheel wash and a former truck wash area. Hot solvents were used in these units to remove grease from the wheels and trucks. This was described as a very messy operation. There were usually several inches of grease on the floor.

These pits have been back filled

0940 Move to SWMU 13-SG-3 on South side of Wheel shop. Collect groundwater only from 9 feet with sampler. No Odor

8/26/98 251 KP7049666 up Omaha

1000 Move to SWMU 13-SG-4 on South Side of Wheel Shop near old Paint Shop. There is a flamable materials storage area that was located on the Southwest Corner of the Old Paint Shop.

1015 Pour Equipment rinsate from water sampler using Evian® water.

1020 Collect groundwater sample at SWMU 13-SG-4. Mettalic odor to it. Plains gets call, must get to OK towite. We check on Keith at MW-11

1110 Move to SWMU 16, SG-4 North Side of Steel Car Shop

8/26/98 23 KP7047666 Omaha

will collect groundwater samples

1132 Complete collection on GW at SWMU 16-SG-4, No Odor

1135 Begin drilling at SWMU 16-SG-3 on east side of Steel Car Shop Will collect ground water from 9 feet from open end large chante point holder. No odor.

Analytical 6614 4, DB 624 megabore 30 meters, Silica glass column. Runs at 50°C Isothermally, with PID and ECD PIDs for BTEX. All chlorinated results come from ECD only. Easy Chrome class VP is integration software. Calibration gases are Scotty IV gas standards. 4 mixes. BTEX 10 ppm Carbon Tet & Chloroform at 1 ppm

TCE standard 10 ppm, PCE, TCA at 1 ppm. Note by analysis there other compounds present in standards, Soil and water done by head space

~~At~~ 1200 Move to SWMU 4-SG-4 to collect a 2nd ground water sample to split with the off site laboratory. Offer split to Woodward Clyde but they decline.

1215 Collect SWMU 4-GW-4 for off site confirmation

1245 Off site for lunch

1345 Set up on AOC 2, SG-~~2~~ 1 will collect water 9 feet in location of ~~Stores No 4 Bul~~ oil & gas storing barn

1415 Set up at SWMU 20-GW-~~X~~ 2. Collect water from 9 feet in South Acetylene sludge pit. Collect sample at 1420, strong solvent odor. Collected sample at 1420

1445 Heavy Rains begining to fall. Crews do not have rain gear with them.

1448 Collect SWMU 20-GW-2 from a open bottom drill stem, North acetylene sludge pit from a depth of 9 feet bgs.

1500 Plains off-site. Going to hotel. Still running samples.

1510 Rejoin crews sampling monitory wells. Keith is set up MW-4. I will get raingear for the crews. Depart site

for hotel to Change clothes and
Then go to Wal Mart for raingear -
1700 Return to site. On Way out
stopped by and got prelimin
analytical results from Plains.
The two groundwater samples in
the acetylene pits are very high
in PCE. He is not finished
running it yet but it is in the
1000's of parts per million range
and the highest concentrations he
ever seen.
1715 Purging Monitoring Well MW-M
Had 10 gallons from it. All Hydacs
Are down 3 of them - No parameters
to record. Keith had calculated
well Volumes and had measure

well depths earlier.
10 gallons is 4 well volumes
1845 Off site for day

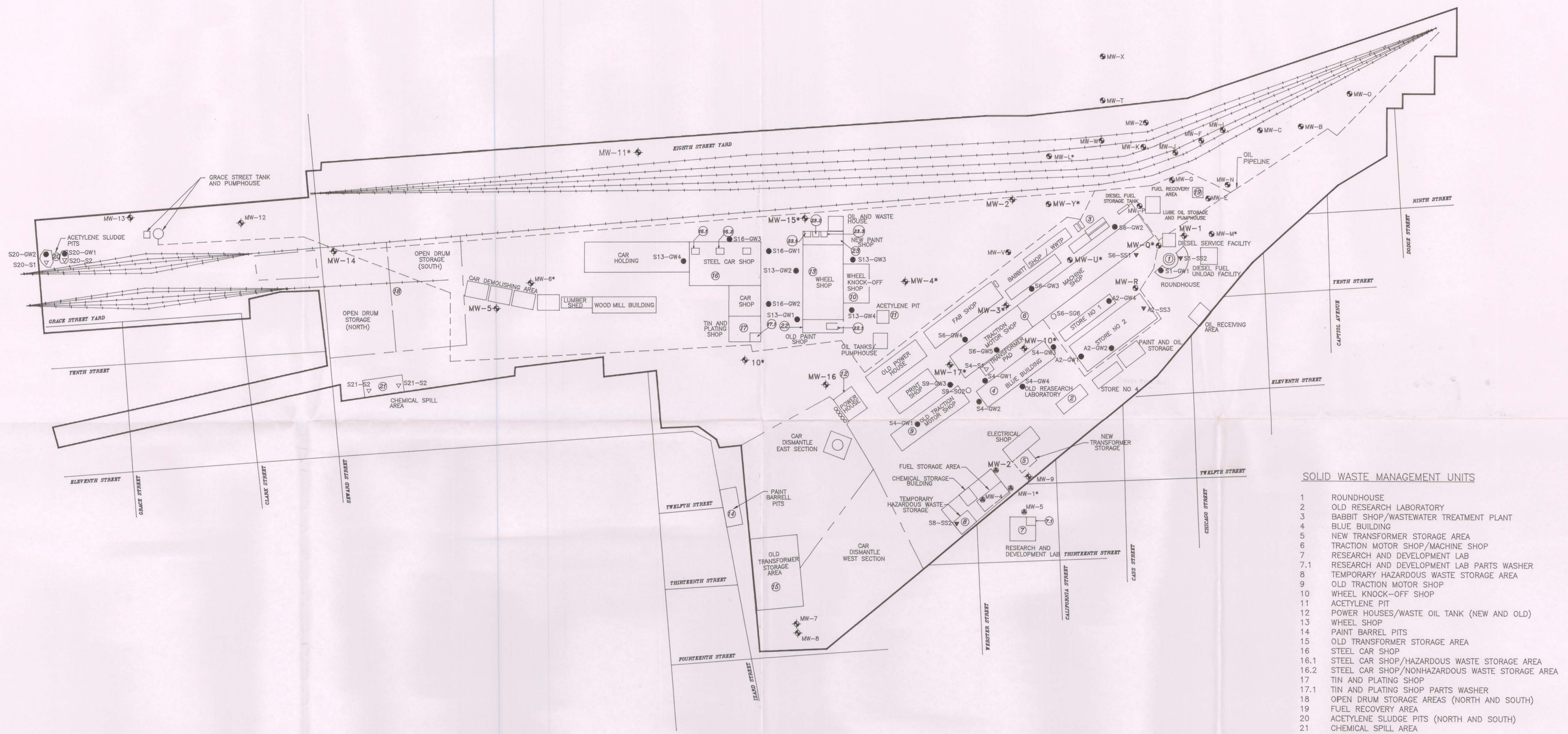
8/26/98
[signature]

ATTACHMENT B

FIGURE 1

ATTACHMENT C

FIELD SHEETS



LEGEND

- ⑯ SOLID WASTE MANAGEMENT UNIT
- — — OIL PIPELINE (AOC 16)
- PROPERTY LINE
- RAILROAD TRACKS
- MONITORING WELLS (1–17)
- MONITORING WELLS INSTALLED FOR HYDROCARBON RECOVERY SYSTEM
- MONITORING WELLS FOR USTSA

SAMPLE LEGEND

- ▽ SHALLOW SOIL (0– TO 2–FOOT FIVE–POINT COMPOSITE)
- ○ SOIL GAS
- ● GROUNDWATER (GEOPROBE®)
- ▼ SUBSURFACE SOIL
- * GROUNDWATER (MONITORING WELL)

120' 0 120' 240'
SCALE: 1" = 240'

SOLID WASTE MANAGEMENT UNITS

1	ROUNDHOUSE
2	OLD RESEARCH LABORATORY
3	BABBIT SHOP/WASTEWATER TREATMENT PLANT
4	BLUE BUILDING
5	NEW TRANSFORMER STORAGE AREA
6	TRACTION MOTOR SHOP/MACHINE SHOP
7	RESEARCH AND DEVELOPMENT LAB
7.1	RESEARCH AND DEVELOPMENT LAB PARTS WASHER
8	TEMPORARY HAZARDOUS WASTE STORAGE AREA
9	OLD TRACTION MOTOR SHOP
10	WHEEL KNOCK–OFF SHOP
11	ACETYLENE PIT
12	POWER HOUSES/WASTE OIL TANK (NEW AND OLD)
13	WHEEL SHOP
14	PAINT BARREL PITS
15	OLD TRANSFORMER STORAGE AREA
16	STEEL CAR SHOP
16.1	STEEL CAR SHOP/HAZARDOUS WASTE STORAGE AREA
16.2	STEEL CAR SHOP/NONHAZARDOUS WASTE STORAGE AREA
17	TIN AND PLATING SHOP
17.1	TIN AND PLATING SHOP PARTS WASHER
18	OPEN DRUM STORAGE AREAS (NORTH AND SOUTH)
19	FUEL RECOVERY AREA
20	ACETYLENE SLUDGE PITS (NORTH AND SOUTH)
21	CHEMICAL SPILL AREA
22	OLD PAINT SHOP
22.1	OLD PAINT SHOP SATELLITE ACCUMULATION AREA
23	NEW PAINT SHOP
23.1	NEW PAINT SHOP ENCLOSED PAINT BOOTH
23.2	NEW PAINT SHOP OPEN–SIDED PAINT BOOTH
23.3	NEW PAINT SHOP SATELLITE ACCUMULATION AREA

UNION PACIFIC RAILROAD COMPANY
OMAHA, NEBRASKA

FIGURE 1
SAMPLE LOCATIONS

TETRA TECH EM INC.

FILE NAME: O:\ACFILE~1\REPA\UNIONPACIFIC\UPSWMUFIG1.DWG
DATE: 09/17/98

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 003 QCC: _ MEDIA: WATER PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: MW-Q

		DATE	TIME	FROM REF PT
LOCATION: ____ NE	BEG:	8/24/98	15:15	EAST: ____
CASE/BATCH/SMO: ____/_/____ LAB: ___	END:	8/24/98	15:30	NORTH: ____
STORET/AIRS NO: ____				DOWN: ____

15:50 Sample Collected

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	HCL +COOL (4 C)	WV	WATER VOLATILES
CUBI	5 ML HNO3	WM	METALS
GLASS	ICED	WP	PESTICIDES
GLASS	ICED	WS	SEMIVOLATILES
1 L CUBITAINER	1:1 HN03	WM27	ARSENIC, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM30	LEAD, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM32	SELENIUM, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM33	THALLIUM, TOTAL, BY AA
~~2-40 ML VIALS~~	~~HCL +COOL (4 C)~~	~~WV86~~	~~HYDROCARBONS, TOTAL PETROL~~
128 OZ GLASS	COOL (4 C)	WS72	EXTRACTABLE PETROLEUM PROD

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

1/8" Diesel on top of water

300 ppm from PID of casing.

SAMPLE COLLECTED BY : PWF

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 004 QCC: _ MEDIA: WATER PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: MW-17
LOCATION: _____ NE
CASE/BATCH/SMO: ____/__/____ LAB: ___
STORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	8/24/98	18:10	EAST: ____
END:	8/24/98	18:30	NORTH: ____
			DOWN: ____

Sampled: 18:40

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	HCL +COOL (4 C)	WV	WATER VOLATILES
CUBI	5 ML HNO3	WM	METALS
GLASS	ICED	WP	PESTICIDES
GLASS	ICED	WS	SEMIVOLATILES
1 L CUBITAINER	1:1 HN03	WM27	ARSENIC, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM30	LEAD, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM32	SELENIUM, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM33	THALLIUM, TOTAL, BY AA
~~2-40 ML VIALS~~	~~HCL +COOL (4 C)~~	~~WV86~~	~~HYDROCARBONS, TOTAL PETROL~~
128 OZ GLASS	COOL (4 C)	WS72	EXTRACTABLE PETROLEUM PROD

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

PID of 220ppm inside casing

Sheen on water.

SAMPLE COLLECTED BY : DWF

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 005 QCC: _ MEDIA: WATER PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: MW-4
LOCATION: NE
CASE/BATCH/SMO: / /
STORET/AIRS NO:
LAB:

	DATE	TIME	FROM REF PT
BEG:	8/24/98	:__	EAST:
END:	8/25/98	8:45	NORTH:
			DOWN:

Sampled @ 8:45

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	HCL +COOL (4 C)	WV	WATER VOLATILES
CUBI	5 ML HNO3	WM	METALS
GLASS	ICED	WP	PESTICIDES
GLASS	ICED	WS	SEMIVOLATILES
1 L CUBITAINER	1:1 HN03	WM27	ARSENIC, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM30	LEAD, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM32	SELENIUM, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM33	THALLIUM, TOTAL, BY AA
~~2-40 ML VIALS~~	~~HCL +COOL (4 C)~~	~~WV86~~	~~HYDROCARBONS, TOTAL PETROL~~
128 OZ GLASS	COOL (4 C)	WS72	EXTRACTABLE PETROLEUM PROD

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

Water very turbid with PVC pieces in it.

SAMPLE COLLECTED BY : DWF

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 006 QCC: _ MEDIA: WATER PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: MW-Y DATE TIME FROM REF PT
LOCATION: NE BEG: __/__/__ __:__ EAST: ____
CASE/BATCH/SMO: ____/_/____ LAB: ___ END: __/__/__ __:__ NORTH: ____
STORET/AIRS NO: _____ DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	HCL +COOL (4 C)	WV	WATER VOLATILES
CUBI	5 ML HNO3	WM	METALS
GLASS	ICED	WP	PESTICIDES
GLASS	ICED	WS	SEMIVOLATILES
1 L CUBITAINER	1:1 HN03	WM27	ARSENIC, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM30	LEAD, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM32	SELENIUM, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM33	THALLIUM, TOTAL, BY AA
~~2-40 ML VIALS~~	~~HCL +COOL (4 C)~~	~~WV86~~	~~HYDROCARBONS, TOTAL PETROL~~
128 OZ GLASS	COOL (4 C)	WS72	EXTRACTABLE PETROLEUM PROD

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

PID = 152 ppm max reading

very silty water.

SAMPLE COLLECTED BY : DWF

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 007 QCC: _ MEDIA: WATER PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: MW-2 DATE TIME FROM REF PT
LOCATION: NE BEG: 8/25/98 13:20 EAST: ____
CASE/BATCH/SMO: ____/__/____ LAB: ___ END: 8/25/98 13:40 NORTH: ____
STORET/AIRS NO: _____ Sampled @ 1350 DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	HCL +COOL (4 C)	WV	WATER VOLATILES
CUBI	5 ML HNO3	WM	METALS
GLASS	ICED	WP	PESTICIDES
GLASS	ICED	WS	SEMIVOLATILES
1 L CUBITAINER	1:1 HN03	WM27	ARSENIC, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM30	LEAD, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM32	SELENIUM, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM33	THALLIUM, TOTAL, BY AA
~~2-40 ML VIALS~~	~~HCL +COOL (4 C)~~	~~WV86~~	~~HYDROCARBONS, TOTAL PETROL~~
128 OZ GLASS	COOL (4 C)	WS72	EXTRACTABLE PETROLEUM PROD

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

NO Volatiles when tested by PID.

First Bailer had reddish orange matter in the water.

SAMPLE COLLECTED BY : DWF

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 008 QCC: _ MEDIA: WATER PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: MW-10 DATE TIME FROM REF PT
LOCATION: _____ NE BEG: 8/25/98 14:25 EAST: ____
CASE/BATCH/SMO: ____/_/____ LAB: ___ END: 8/25/98 14:45 NORTH: ____
STORET/AIRS NO: _____ DOWN: ____

Sampled 1455

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	HCL +COOL (4 C)	WV	WATER VOLATILES
CUBI	5 ML HNO3	WM	METALS
GLASS	ICED	WP	PESTICIDES
GLASS	ICED	WS	SEMIVOLATILES
1 L CUBITAINER	1:1 HN03	WM27	ARSENIC, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM30	LEAD, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM32	SELENIUM, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM33	THALLIUM, TOTAL, BY AA
~~2-40 ML VIALS~~	~~HCL +COOL (4 C)~~	~~WV86~~	~~HYDROCARBONS, TOTAL PETROL~~
128 OZ GLASS	COOL (4 C)	WS72	EXTRACTABLE PETROLEUM PROD

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

Well did not have a well plug or cap.

Well has sewage odor & in close proximity to a 10' combined sewer. Also had dead insects (wasps) in water.

SAMPLE COLLECTED BY : _____

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 009 QCC: _ MEDIA: WATER PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: SWMW #4 - GW#2 DATE TIME FROM REF PT
LOCATION: _____ NE BEG: 8/25/98 15:22 EAST: ____
CASE/BATCH/SMO: ____/__/____ LAB: ___ END: __/__/__ __:__ NORTH: ____
STORET/AIRS NO: _____ DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	HCL +COOL (4 C)	WV	WATER VOLATILES only
~~CUBI~~	~~5 ML HNO3~~	~~WM~~	~~METALS~~
GLASS	ICED	WP	PESTICIDES
GLASS	ICED	WS	SEMIVOLATILES
1 L CUBITAINER	1:1 HN03	~~WM27~~	~~ARSENIC~~, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	~~WM30~~	LEAD, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM32	SELENIUM, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM33	THALLIUM, TOTAL, BY AA
2-40 ML VIALS	HCL +COOL (4 C)	WV86	HYDROCARBONS, TOTAL PETROL
~~128 OZ GLASS~~	~~COOL (4 C)~~	~~WS72~~	~~EXTRACTABLE PETROLEUM PROD~~

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

Geoprobe groundwater sample location.
(@ SWMW #4, location)

SAMPLE COLLECTED BY : CAE

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 010 QCC: _ MEDIA: WATER PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: SWMU #4 - GWP1
LOCATION: Pine Building NE
CASE/BATCH/SMO: ____/__/____ LAB: ___
STORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	8/25/98	16:15	EAST: ____
END:	__/__/__	__:__	NORTH: ____
			DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	HCL +COOL (4 C)	WV	WATER VOLATILES only
~~CUBI~~	~~5 ML HNO3~~	~~WM~~	~~METALS~~
GLASS	ICED	WP	PESTICIDES
GLASS	ICED	WS	SEMIVOLATILES
1 L CUBITAINER	1:1 HN03	WM27	ARSENIC, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM30	LEAD, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM32	SELENIUM, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM33	THALLIUM, TOTAL, BY AA
2-40 ML VIALS	HCL +COOL (4 C)	WV86	HYDROCARBONS, TOTAL PETROL
128 OZ GLASS	COOL (4 C)	WS72	EXTRACTABLE PETROLEUM PROD

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

Geoprobe groundwater sample location at SWMU #4, location 1

SAMPLE COLLECTED BY : CAE

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 011 QCC: F MEDIA: WATER PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: TRIP BLANK DATE TIME FROM REF PT
LOCATION: _____ NE BEG: __/__/__ __:__ EAST: ____
CASE/BATCH/SMO: _____/_/_____ LAB: ___ END: __/__/__ __:__ NORTH: ____
STORET/AIRS NO: _____ DOWN: ____

8/~~27~~ 26 /98 Pat in cooler with samples
RB

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	HCL +COOL (4 C)	WV	WATER VOLATILES
~~2-40 ML VIALS~~	~~HCL +COOL (4 C)~~	~~WV86~~	~~HYDROCARBONS, TOTAL PETROL~~

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

SAMPLE COLLECTED BY : _____

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 012 QCC: _ MEDIA: WATER PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: Well-10
LOCATION: NE
CASE/BATCH/SMO: / /
LAB:
STORET/AIRS NO:

DATE TIME FROM REF PT
BEG: / / : EAST:
END: 8/25/98 16:40 NORTH:
DOWN:

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	HCL +COOL (4 C)	WV	WATER VOLATILES
CUBI	5 ML HNO3	WM	METALS
GLASS	ICED	WP	PESTICIDES
GLASS	ICED	WS	SEMIVOLATILES
1 L CUBITAINER	1:1 HN03	WM27	ARSENIC, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM30	LEAD, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM32	SELENIUM, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM33	THALLIUM, TOTAL, BY AA
~~2-40 ML VIALS~~	~~HCL +COOL (4 C)~~	~~WV86~~	~~HYDROCARBONS, TOTAL PETROL~~
128 OZ GLASS	COOL (4 C)	WS72	EXTRACTABLE PETROLEUM PROD

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

PID = 19.5 max reading in the casing.
Also collected MS/MSD into additional 1Gal Amber Jar.

SAMPLE COLLECTED BY : DWF

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII

ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 013 QCC: F MEDIA: WATER PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __

LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: TRIP BLANK DATE TIME FROM REF PT

LOCATION: _____ NE BEG: __/__/__ __:__ EAST: ____

CASE/BATCH/SMO: _____/__/_____ LAB: ___ END: __/__/__ __:__ NORTH: ____

STORET/AIRS NO: _____ DOWN: ____

8/25/98 Put in Cooler

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	HCL +COOL (4 C)	WV	WATER VOLATILES
~~2-40 ML VIALS~~	~~HCL +COOL (4 C)~~	~~WV06~~	~~HYDROCARBONS, TOTAL PETROL~~

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

SAMPLE COLLECTED BY : _____

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 014 QCC: _ MEDIA: WATER PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: MW-1 DATE TIME FROM REF PT
LOCATION: NE BEG: / / : EAST:
CASE/BATCH/SMO: / / LAB: END: 8/25/98 18:15 NORTH:
STORET/AIRS NO: DOWN:

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	HCL +COOL (4 C)	WV	WATER VOLATILES
CUBI	5 ML HNO3	WM	METALS
GLASS	ICED	WP	PESTICIDES
GLASS	ICED	WS	SEMIVOLATILES
1 L CUBITAINER	1:1 HN03	WM27	ARSENIC, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM30	LEAD, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM32	SELENIUM, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM33	THALLIUM, TOTAL, BY AA
~~2-40 ML VIALS~~	~~HCL +COOL (4 C)~~	~~WV86~~	~~HYDROCARBONS, TOTAL PETROL~~
128 OZ GLASS	COOL (4 C)	WS72	EXTRACTABLE PETROLEUM PROD

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

Duplicate Collected Here

PID = 160 ppm

Slight Sheen on water.

SAMPLE COLLECTED BY : DMF

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII

ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 015 QCC: F MEDIA: WATER PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __

LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: ~~TRIP~~ BLANK, EQUIPMENT DATE TIME FROM REF PT

LOCATION: _____ NE BEG: __/__/__ __:__ EAST: ____

CASE/BATCH/SMO: _____/_/_____ LAB: ___ END: 8/26/98 10:15 NORTH: ____

STORET/AIRS NO: _____ DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	HCL +COOL (4 C)	WV	WATER VOLATILES
~~2-40 ML VIALS~~	~~HCL +COOL (4 C)~~	~~WV86~~	~~HYDROCARBONS, TOTAL PETROL~~

ADH13

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

Equipment rinsate blank of Geoprobe Equipment

SAMPLE COLLECTED BY : C. Enos

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 016 QCC: _ MEDIA: WATER PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: mw-11
LOCATION: _____ NE
CASE/BATCH/SMO: ____/__/____ LAB: ___
STORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	8/26/98	10:30	EAST: ____
END:	8/26/98	11:00	NORTH: ____
			DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	HCL +COOL (4 C)	WV	WATER VOLATILES
CUBI	5 ML HNO3	WM	METALS
GLASS	ICED	WP	PESTICIDES
GLASS	ICED	WS	SEMIVOLATILES
1 L CUBITAINER	1:1 HN03	WM27	ARSENIC, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM30	LEAD, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM32	SELENIUM, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM33	THALLIUM, TOTAL, BY AA
~~2-40 ML VIALS~~	~~HCL +COOL (4°C)~~	~~WV86~~	~~HYDROCARBONS, TOTAL PETROL~~
128 OZ GLASS	COOL (4 C)	WS72	EXTRACTABLE PETROLEUM PROD

KA

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

mw-11

1.6 ppm on PID

extra volume collected

SAMPLE COLLECTED BY : E. Brown

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 017 QCC: _ MEDIA: WATER PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: mw-6 DATE TIME FROM REF PT
LOCATION: _____ NE BEG: __/__/__ __:__ EAST: ____
CASE/BATCH/SMO: _____/_/_____ LAB: ___ END: 8/26/98 12:25 NORTH: ____
STORET/AIRS NO: _____ DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	HCL +COOL (4 C)	WV	WATER VOLATILES
CUBI	5 ML HNO3	WM	METALS
GLASS	ICED	WP	PESTICIDES
GLASS	ICED	WS	SEMIVOLATILES
1 L CUBITAINER	1:1 HN03	WM27	ARSENIC, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM30	LEAD, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM32	SELENIUM, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM33	THALLIUM, TOTAL, BY AA
~~2-40 ML VIALS~~	~~HCL +COOL (4 C)~~	~~WV86~~	~~HYDROCARBONS, TOTAL PETROL~~
128 OZ GLASS	COOL (4 C)	WS72	EXTRACTABLE PETROLEUM PROD

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

0 ppm
mw-6

SAMPLE COLLECTED BY : K. Brown

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 018 QCC: _ MEDIA: WATER PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: MW-15 DATE TIME FROM REF PT
LOCATION: NE BEG: __/__/__ __:__ EAST:
CASE/BATCH/SMO: __/__/__ LAB: END: 8/26/98 __:__ NORTH:
STORET/AIRS NO: DOWN:

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	HCL +COOL (4 C)	WV	WATER VOLATILES
CUBI	5 ML HNO3	WM	METALS
GLASS	ICED	WP	PESTICIDES
GLASS	ICED	WS	SEMIVOLATILES
1 L CUBITAINER	1:1 HN03	WM27	ARSENIC, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM30	LEAD, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM32	SELENIUM, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM33	THALLIUM, TOTAL, BY AA
~~2-40 ML VIALS~~	~~HCL +COOL (4 C)~~	~~WV86~~	~~HYDROCARBONS, TOTAL PETROL~~
128 OZ GLASS	COOL (4 C)	WS72	EXTRACTABLE PETROLEUM PROD

Kab

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

MW-15

extra volume collected

SAMPLE COLLECTED BY : K. Brown

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 019 QCC: _ MEDIA: WATER PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: mw-4 DATE TIME FROM REF PT
LOCATION: _____ NE BEG: 8/26/98 16:03 EAST: ____
CASE/BATCH/SMO: ____/__/____ LAB: ___ END: __/__/__ __:__ NORTH: ____
STORET/AIRS NO: _____ DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	HCL +COOL (4 C)	WV	WATER VOLATILES
CUBI	5 ML HNO3	WM	METALS
GLASS	ICED	WP	PESTICIDES
GLASS	ICED	WS	SEMIVOLATILES
1 L CUBITAINER	1:1 HN03	WM27	ARSENIC, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM30	LEAD, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM32	SELENIUM, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM33	THALLIUM, TOTAL, BY AA
~~2-40 ML VIALS~~	~~HCL +COOL (4 C)~~	~~WV06~~	~~HYDROCARBONS, TOTAL PETROL~~ KB
128 OZ GLASS	COOL (4 C)	WS72	EXTRACTABLE PETROLEUM PROD

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

split sample with Woodward Clyde
mw-4-01

SAMPLE COLLECTED BY : K. Brown

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 020 QCC: _ MEDIA: WATER PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: MW-3 DATE TIME FROM REF PT
LOCATION: _____ NE BEG: 8/26/98 17:25 EAST: ____
CASE/BATCH/SMO: ____/__/____ LAB: ___ END: __/__/__ __:__ NORTH: ____
STORET/AIRS NO: _____ DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	HCL +COOL (4 C)	WV	WATER VOLATILES
CUBI	5 ML HNO3	WM	METALS
GLASS	ICED	WP	PESTICIDES
GLASS	ICED	WS	SEMIVOLATILES
1 L CUBITAINER	1:1 HN03	WM27	ARSENIC, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM30	LEAD, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM32	SELENIUM, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM33	THALLIUM, TOTAL, BY AA
~~2-40 ML VIALS~~	~~HCL +COOL (4 C)~~	~~WV86~~	~~HYDROCARBONS, TOTAL PETROL~~ K#
128 OZ GLASS	COOL (4 C)	WS72	EXTRACTABLE PETROLEUM PROD

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

SAMPLE COLLECTED BY : K. Brown

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 022 QCC: _ MEDIA: WATER PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: MW-M DATE TIME FROM REF PT
LOCATION: _____ NE BEG: 8/26/98 17:50 EAST: ____
CASE/BATCH/SMO: ____/_/____ LAB: ___ END: __/__/__ __:__ NORTH: ____
STORET/AIRS NO: _____ DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	HCL +COOL (4 C)	WV	WATER VOLATILES
CUBI	5 ML HNO3	WM	METALS
GLASS	ICED	WP	PESTICIDES
GLASS	ICED	WS	SEMIVOLATILES
1 L CUBITAINER	1:1 HN03	WM27	ARSENIC, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM30	LEAD, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM32	SELENIUM, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM33	THALLIUM, TOTAL, BY AA
~~2-40 ML VIALS~~	~~HCL +COOL (4 C)~~	~~WV86~~	~~HYDROCARBONS, TOTAL PETROL~~ KB
128 OZ GLASS	COOL (4 C)	WS72	EXTRACTABLE PETROLEUM PROD

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

SAMPLE COLLECTED BY : C. Enos

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 024 QCC: _ MEDIA: WATER PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: SWMU 20 GW-1 DATE TIME FROM REF PT
LOCATION: NE BEG: 8/26/98 14:20 EAST:
CASE/BATCH/SMO: / / LAB: END: / / : NORTH:
STORET/AIRS NO: DOWN:

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2 ~~2~~-40 ML VIALS	HCL +COOL (4 C)	WV	WATER VOLATILES
~~CUBI~~	~~5 ML HNO3~~	~~WM~~	~~METALS~~ RB
~~GLASS~~	~~ICED~~	~~WP~~	~~PESTICIDES~~ RB
~~GLASS~~	~~ICED~~	~~WS~~	~~SEMIVOLATILES~~ RB
~~1 L CUBITAINER~~	~~1:1 HN03~~	~~WM27~~	~~ARSENIC, TOTAL, BY AA~~ RB
~~1 L CUBITAINER~~	~~1:1 HN03~~	~~WM30~~	~~LEAD, TOTAL, BY AA~~ RB
~~1 L CUBITAINER~~	~~1:1 HN03~~	~~WM32~~	~~SELENIUM, TOTAL, BY AA~~ RB
~~1 L CUBITAINER~~	~~1:1 HN03~~	~~WM33~~	~~THALLIUM, TOTAL, BY AA~~ RB
~~2 40 ML VIALS~~	~~HCL +COOL (4 C)~~	~~WV86~~	~~HYDROCARBONS, TOTAL PETROL~~ RB
~~128 OZ~~ GLASS	~~COOL (4 C)~~	~~WS72~~	~~EXTRACTABLE PETROLEUM PROD~~ RB

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

very high concentration

S. Pit

SAMPLE COLLECTED BY : Plains Enviromental

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 025 QCC: _ MEDIA: WATER PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: SWMU 20 GW-2 DATE TIME FROM REF PT
LOCATION: _____ NE BEG: 8/26/98 14:48 EAST: ____
CASE/BATCH/SMO: _____/_/_____ LAB: ___ END: __/__/__ __:__ NORTH: ____
STORET/AIRS NO: _____ DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	HCL +COOL (4 C)	WV	WATER VOLATILES
~~CUBI~~	~~5 ML HNO3~~	~~WM~~	~~METALS~~ KB
~~GLASS~~	~~ICED~~	~~WP~~	~~PESTICIDES~~ KB
~~GLASS~~	~~ICED~~	~~WS~~	~~SEMIVOLATILES~~ KB
~~1 L CUBITAINER~~	~~1:1 HN03~~	~~WM27~~	~~ARSENIC, TOTAL, BY AA~~ KB
~~1 L CUBITAINER~~	~~1:1 HN03~~	~~WM30~~	~~LEAD, TOTAL, BY AA~~ KB
~~1 L CUBITAINER~~	~~1:1 HN03~~	~~WM32~~	~~SELENIUM, TOTAL, BY AA~~ KB
~~1 L CUBITAINER~~	~~1:1 HN03~~	~~WM33~~	~~THALLIUM, TOTAL, BY AA~~ KB
~~2-40 ML VIALS~~	~~HCL +COOL (4 C)~~	~~WV86~~	~~HYDROCARBONS, TOTAL PETROL~~ KB
~~128 OZ GLASS~~	~~COOL (4 C)~~	~~WS72~~	~~EXTRACTABLE PETROLEUM PROD~~ KB

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

N. Pit

very high concentration

SAMPLE COLLECTED BY : Plains Environmental

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 026 QCC: _ MEDIA: WATER PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: Swmu 4 GW-4 DATE TIME FROM REF PT
LOCATION: _____ NE BEG: 8/26/98 12:15 EAST: ____
CASE/BATCH/SMO: ____/_/____ LAB: ___ END: __/__/__ __:__ NORTH: ____
STORET/AIRS NO: _____ DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	HCL +COOL (4 C)	WV	WATER VOLATILES
~~CUBI~~	~~5 ML HNO3~~	~~WM~~	~~METALS~~ KB
~~GLASS~~	~~ICED~~	~~WP~~	~~PESTICIDES~~ KB
~~GLASS~~	~~ICED~~	~~WS~~	~~SEMIVOLATILES~~ KB
~~1 L CUBITAINER~~	~~1:1 HN03~~	~~WM27~~	~~ARSENIC, TOTAL, BY AA~~ KB
~~1 L CUBITAINER~~	~~1:1 HN03~~	~~WM30~~	~~LEAD, TOTAL, BY AA~~ KB
~~1 L CUBITAINER~~	~~1:1 HN03~~	~~WM32~~	~~SELENIUM, TOTAL, BY AA~~ KB
~~1 L CUBITAINER~~	~~1:1 HN03~~	~~WM33~~	~~THALLIUM, TOTAL, BY AA~~ KB
~~2-40 ML VIALS~~	~~HCL +COOL (4 C)~~	~~WV86~~	~~HYDROCARBONS, TOTAL PETROL~~ KB
~~128 OZ GLASS~~	~~COOL (4 C)~~	~~WS72~~	~~EXTRACTABLE PETROLEUM PROD~~ KB

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

low concentration

SAMPLE COLLECTED BY : Plains Environmental

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII

ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 030 QCC: F MEDIA: WATER PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __

LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: Soil Sampling Equipment DATE TIME FROM REF PT

LOCATION: NE BEG: / / : EAST:

CASE/BATCH/SMO: / / LAB: END: 8/25/98 18:10 NORTH:

STORET/AIRS NO: DOWN:

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
~~2-40 ML VIALS~~	~~HCL +COOL (4 C)~~	~~WV~~	~~WATER VOLATILES~~
CUBI	5 ML HNO3	WM	METALS
GLASS	ICED	WP	PESTICIDES
GLASS	ICED	WS	SEMIVOLATILES
1 L CUBITAINER	1:1 HN03	WM27	ARSENIC, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM30	LEAD, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM32	SELENIUM, TOTAL, BY AA
1 L CUBITAINER	1:1 HN03	WM33	THALLIUM, TOTAL, BY AA
~~2-40 ML VIALS~~	~~HCL +COOL (4 C)~~	~~WV86~~	~~HYDROCARBONS, TOTAL PETROL~~
~~128 OZ GLASS~~	~~COOL (4 C)~~	~~WS72~~	~~EXTRACTABLE PETROLEUM PROD~~

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER: OPERABLE UNIT:

Field Blank

SAMPLE COLLECTED BY : Fred Brown

DRAFT

FIELD SHEET
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 144 QCC: _ MEDIA: SOIL PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: SWMU - 20 S. Pit
LOCATION: _____ NE
CASE/BATCH/SMO: ____/_/____ LAB: ___
STORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	8/26/98	09:00	EAST: ____
END:	8/26/98	09:45	NORTH: ____
			DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
GLASS	ICED	SS	SEMIVOLATILES
~~2-40 ML VIALS~~	~~COOL (4 C)~~	~~SV54~~	~~HYDROCARBONS, TOTAL PETROL~~
~~8 OZ GLASS~~	~~COOL (4 C)~~	~~SS70~~	~~EXTRACTABLE PETROLEUM PROD~~
Glass	ICED	SM	Metals
Glass	ICED	SP	Pesticides

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

SWMU - 20 S. Pit

5 part composite

300+ ppm on PID

SAMPLE COLLECTED BY : K. Brown, J. Punajcek

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 145 QCC: _ MEDIA: SOIL PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: SWMH 20-N.S. PIT

			DATE	TIME	FROM REF PT
LOCATION:		NE	BEG: / /	:	EAST:
CASE/BATCH/SMO: / /	LAB:		END: 8/25/98	12:20	NORTH:
STORET/AIRS NO:					DOWN:

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
GLASS	ICED	SS	SEMIVOLATILES
~~2 40 ML VIALS~~	~~COOL (4 C)~~	~~SV54~~	~~HYDROCARBONS, TOTAL PETROL~~ KH
~~8 OZ GLASS~~	~~COOL (4 C)~~	~~SS70~~	~~EXTRACTABLE PETROLEUM PROD~~
"	"	SM	METALS
"	"	SP	PESTICIDES

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

SWMH 20 -N.S PIT

2189 ppm PID final aliquote

5 point composite

Woodward-Clyde split

Sampler K.B.

SAMPLE COLLECTED BY : KKH

DRAFT FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: ~~141~~ KA145D QCC: _ MEDIA: SOIL PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: SWMU 20 - N.S. PIT
LOCATION: Omaha NE
CASE/BATCH/SMO: ____/_/____ LAB: ___
STORET/AIRS NO: ____

	DATE	TIME	FROM REF PT	
BEG:	/ /	:	EAST:	
END:	8/25/98	12:20	NORTH:	
			DOWN:	

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
GLASS	ICED	SS	SEMIVOLATILES
~~2-40 ML VIALS~~	~~COOL (4 C)~~	~~SV54~~	~~HYDROCARBONS, TOTAL PETROL~~ KH
~~8 OZ GLASS~~	~~COOL (4 C)~~	~~SS70~~	~~EXTRACTABLE PETROLEUM PROD~~
		SM	metals
		SP	Pesticides

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

Dup SWMU 20-N.S. Pit

sampler K.B.

SAMPLE COLLECTED BY : KH

DRAFT

FIELD SHEET
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 150 QCC: _ MEDIA: SOIL PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: SWMU21-A (south) DATE TIME FROM REF PT
LOCATION: _____ NE BEG: __/__/__ __:__ EAST: ____
CASE/BATCH/SMO: ____/__/____ LAB: ___ END: 8/26/98 15:45 NORTH: ____
STORET/AIRS NO: _____ DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
GLASS	NONE	SP	PESTICIDES

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

5 part sample

start 15:20
finish 15:45

woodward - clyde split

sampler K.B.

Behind boiler company

KVH

SAMPLE COLLECTED BY : _____

DRAFT

FIELD SHEET
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 151 QCC: _ MEDIA: SOIL PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: SW MH 21 - B (North)
LOCATION: _____ NE
CASE/BATCH/SMO: ____/__/____ LAB: ___
STORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	__/__/__	:	EAST: ____
END:	8/25/98	16:15	NORTH: ____
			DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
GLASS	NONE	SP	PESTICIDES

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER: ___ OPERABLE UNIT: ___

start 15:55
finish 16:15

5 part composite

sampler K.B.

SAMPLE COLLECTED BY : KVH

DRAFT

FIELD SHEET
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 98 ACTNO: ADH13 SAMNO: 152 QCC: _ MEDIA: SOIL PL: HARRIS, DIANE

ACTIVITY DES: UNION PACIFIC RAILROAD REF LATITUDE: __ __ __
LOCATION: OMAHA NE PROJECT NUM: A53 PT: LONGITUDE: __ __ __

SAMPLE DES: SWM4 4
LOCATION: NE
CASE/BATCH/SMO: / / LAB:
STORET/AIRS NO:

	DATE	TIME	FROM REF PT
BEG:	/ /	:	EAST:
END:	8/25/98	17:30	NORTH:
			DOWN:

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
GLASS	NONE	SP	PESTICIDES (PCBs)

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER: ___ OPERABLE UNIT: ___

4 part composite

start 17:10

finish 17:30

woodward-clyde split

sampler K.B.

SAMPLE COLLECTED BY : KVH

ATTACHMENT D

PHOTOGRAPHIC LOG

Union Pacific Railroad
Omaha, Nebraska

Photo No: 01 **Direction Facing:** East **Photographer:** Teri H. Pham **Date/Time:** 08/24/98; 1445
Description: PES setting up to collect soil gas sample at SWMU8-SS2.

Photo No: 02 **Direction Facing:** East **Photographer:** Teri H. Pham **Date/Time:** 08/24/98; 1545
Description: PES collecting groundwater sample at SWMU9-GW1.

Union Pacific Railroad
Omaha, Nebraska

Photo No: 03 **Direction Facing:** Southwest **Photographer:** Teri H. Pham **Date/Time:** 08/24/98; 1700
Description: PES collecting soil gas sample at SWMU9-SG2.

Photo No: 04 **Direction Facing:** West **Photographer:** Teri H. Pham **Date/Time:** 08/24/98; 1750
Description: PES collecting groundwater sample at SWMU1-GW1.

Union Pacific Railroad
Omaha, Nebraska

Photo No: 05 **Direction Facing:** Northeast **Photographer:** Teri H. Pham **Date/Time:** 08/25/98; 0945
Description: PES collecting groundwater sample at SWMU6-GW5.

Photo No: 06 **Direction Facing:** Northwest **Photographer:** Teri H. Pham **Date/Time:** 08/25/98; 0950
Description: A view from SWMU6; the former Blue Building (depicted as the large stain in the left of the photo), Monitoring Well 10 (depicted by the blue 55-gallon drum), and the Print Shop (seen in the background) are shown in this photograph.

Union Pacific Railroad
Omaha, Nebraska

Photo No: 07 **Direction Facing:** North **Photographer:** Teri H. Pham **Date/Time:** 08/25/98; 0950
Description: A view from SWMU6; the Wheel Shop is shown in the background of this photograph.

Photo No: 08 **Direction Facing:** South **Photographer:** Teri H. Pham **Date/Time:** 08/25/98; 0950
Description: A view from SWMU6; the grassy area is AOC2 and the Roundhouse is shown in the background of this photograph.

Union Pacific Railroad
Omaha, Nebraska

Photo No: 09 **Direction Facing:** South **Photographer:** Teri H. Pham **Date/Time:** 08/25/98; 1000
Description: PES collecting soil gas sample at SWMU6-SG6.

Photo No: 10 **Direction Facing:** Northeast **Photographer:** Teri H. Pham **Date/Time:** 08/25/98; 1045
Description: PES collecting groundwater sample at AOC2-GW4.

Union Pacific Railroad
Omaha, Nebraska

Photo No: 11 **Direction Facing:** Southeast **Photographer:** Teri H. Pham **Date/Time:** 08/25/98; 1700
Description: PES redrilling SWMU8-SS2; collected soil sample.

Photo No: 12 **Direction Facing:** South **Photographer:** Teri Pham **Date/Time:** 8/25/98; 1745
Description: PES collectiong groundwater sample at SWMU16-GW1.

Union Pacific Railroad
Omaha, Nebraska

Photo No: 13 **Direction Facing:** East **Photographer:** Teri H. Pham **Date/Time:** 08/26/98; 0900
Description: PES collecting groundwater sample at SWMU13-GW2.

Photo No: 14 **Direction Facing:** East **Photographer:** Teri H. Pham **Date/Time:** 08/26/98; 0920
Description: PES collecting groundwater sample at SWMU13-GW1.

Photo No: 15 **Direction Facing:** North **Photographer:** Teri H. Pham **Date/Time:** 08/26/98; 1000
Description: PES collecting groundwater sample at SWMU13-GW4.

Photo No: 16 **Direction Facing:** South **Photographer:** Teri H. Pham **Date/Time:** 08/26/98; 1130
Description: PES collecting groundwater sample at SWMU16-GW4.

Union Pacific Railroad
Omaha, Nebraska

Photo No: 17 **Direction Facing:** South **Photographer:** Teri H. Pham **Date/Time:** 08/26/98; 1135
Description: PES collecting groundwater sample at SWMU16-GW3.

Photo No: 18 **Direction Facing:** Southwest **Photographer:** Teri H. Pham **Date/Time:** 08/26/98; 1200
Description: PES collecting confirmation groundwater sample at SWMU4-GW4.

Photo No: 19 **Direction Facing:** Southwest **Photographer:** Teri H. Pham **Date/Time:** 08/26/98; 1345
Description: PES collecting groundwater sample at AOC2-GW2.

Photo No: 20 **Direction Facing:** West **Photographer:** Teri H. Pham **Date/Time:** 08/26/98; 1415
Description: PES collecting groundwater sample at SWMU20-GW1.

Union Pacific Railroad
Omaha, Nebraska

Photo No: 21 **Direction Facing:** East **Photographer:** Teri H. Pham **Date/Time:** 08/26/98; 1445
Description: PES collecting groundwater sample at SWMU20-GW2.

Photo No: 22 **Direction Facing:** South **Photographer:** Teri H. Pham **Date/Time:** 08/26/98; 1500
Description: PES in mid ground at SWMU20-GW2.

Union Pacific Railroad
Omaha, Nebraska

Photo No: 23 **Direction Facing:** Southwest **Photographer:** Teri H. Pham **Date/Time:** 08/27/98; 1200
Description: Aerial panoramic view of the UPRR facility taken from bridge near southeast edge of site.

Photo No: 24 **Direction Facing:** Southwest **Photographer:** Teri H. Pham **Date/Time:** 08/27/98; 1200
Description: Aerial panoramic view of the UPRR facility taken from bridge near southeast edge of site.

Union Pacific Railroad
Omaha, Nebraska

Photo No: 25 **Direction Facing:** West **Photographer:** Teri H. Pham **Date/Time:** 08/27/98; 1200
Description: Aerial panoramic view of the UPRR facility taken from bridge near southeast edge of site.

Photo No: 26 **Direction Facing:** Northwest **Photographer:** Teri H. Pham **Date/Time:** 08/27/98; 1200
Description: Aerial panoramic view of the UPRR facility taken from bridge near southeast edge of site.

Union Pacific Railroad
Omaha, Nebraska

Photo No: 27 **Direction Facing:** North **Photographer:** Teri H. Pham **Date/Time:** 08/27/98; 1200
Description: Aerial panoramic view of the UPRR facility taken from bridge near southeast edge of site.